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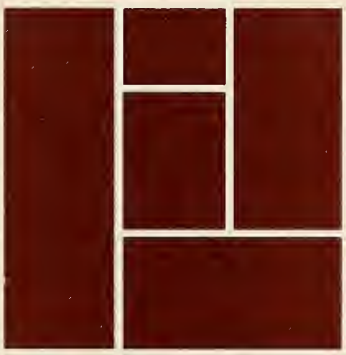
Working Paper No. 1298-12

Medicaid and Teaching Hospitals: Current Policies and Future Consequences

by

Jack Hadley



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Research Paper

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MEDICAID AND TEACHING HOSPITALS:

CURRENT POLICIES AND FUTURE CONSEQUENCES

The reimbursement of services provided by hospitals' residents and teaching physicians has long been a troublesome issue for both the Medicaid and Medicare programs.[1] The underlying controversy has two major aspects. One concerns the separability of education and patient care in the teaching hospital. Medicaid is designed to pay for medical services provided to low income persons. However, almost ninety percent of the revenues used to pay residents' stipends and teaching physicians' salaries come from patient care revenues.[2] It would appear, then, that Medicaid payments help to underwrite physicians' graduate medical training.[3] Thus, it seems inequitable that a program designed to provide care to the poor should subsidize the education of a professional group with exceedingly high income expectations.

The second aspect of the reimbursement issue concerns program efficiency. Many teaching physicians receive their compensation from both a salary for educational activities and separate fee-for-service billings for patient care activities. However, education and patient care are typically joint activities, i.e., residents learn and physicians teach through the process of providing patient care. Thus, the question arises whether physicians who both receive salaries for educational activities and bill fee-for-service are being compensated twice for doing essentially the same thing. A related question is whether teaching physicians receive fee-for-service payments for services actually delivered by residents. In this case, the double payment takes the form of the stipend paid to the resident plus the teaching physician's billing.[4]

Both the inequity of subsidizing residents' training and the inefficiency of double billing have been raised as possible justifications for reducing payments for residents' salaries and to teaching physicians. Medicare attempted to do so by implementing new regulations under Section 227 of the 1972 amendments to the Social Security Act. After much study, debate, and delay, the draft regulations were eventually rescinded in 1980 without ever having been implemented. Among Medicaid programs, New York was the most aggressive in attempting to reduce payments for stipends and teaching physicians' salaries. The program declared that ten percent of residents' stipends covered educational activities, and, accordingly, reduced its payments for stipends by ten percent. This decision was overturned by the New York state court in 1979.[5]

These "old" problems of financing graduate medical education are now joined by the new problems implicit in the fiscal realities of the 1980s. As is well known, governments at all levels currently face stringent fiscal conditions. Several state governments now operate under explicit tax/expenditure-limit laws. Taxpayers in many more states appear less willing than in the past to tolerate further growth in government spending. Finally, all Medicaid programs face cuts in their federal matching payment. (These cuts could be as high as 3 percent in fiscal 1982, 4 percent in 1983, and 4.5 percent in 1984.) Under these conditions, Medicaid programs' interest in reducing payments for educational activities may receive a sharp boost.

The primary goal of this paper is to report Medicaid programs' current policies regarding the reimbursement of residents' stipends, salaries received by physicians for educational activities, and services provided by residents and/or teaching physicians to Medicaid recipients. In order to give these policies a context, the paper also reports information on other third-party

payers' policies for reimbursing teaching expenses, on the importance of Medicaid revenues to teaching hospitals, on the magnitudes of teaching hospitals' stipend and salary expenses, and on the significance of teaching hospitals for Medicaid expenditures. Finally, the paper discusses some of the potential consequences of Medicaid cuts for teaching hospitals and Medicaid program expenditures.

The data reported in this paper come primarily from two sources. One is a recent Urban Institute survey of Medicaid programs' physician reimbursement policies. Lengthy questionnaires were mailed to fifty Medicaid programs (all states, except Arizona, and the District of Columbia). Extensive telephone follow-ups were made in early 1981 to fill in missing information and to clarify and verify ambiguous responses. One section of this survey was directed at policies on the reimbursement of residents' stipends, teaching physicians' educational salaries, and fee-for-service billings to Medicaid by teaching physicians. In six states, none of the hospitals have any approved graduate medical education programs. Two states, Indiana and Minnesota, did not to respond to the survey. Thus, forty-two Medicaid programs provided usable responses for at least some parts of the questionnaire.

The second major data source is a survey conducted at the end of 1979 of all hospitals with 100 or more beds. The purpose of this survey, which was designed by The Urban Institute and fielded by the American Hospital Association (AHA), was to collect data on hospital revenues and the reimbursement and financing of graduate medical education. About 3,400 hospitals received questionnaires and approximately two-thirds responded after two mail follow-ups. Approximately 600 of the responding hospitals offered at least one AMA-approved residency program. Although the overall response rate for the survey was fairly high, item response rates, particularly for some of the financial questions, were frequently lower.

REIMBURSEMENT POLICIES FOR TEACHING EXPENSES

As noted above, one of the complexities of reimbursing residents and teaching physicians is that their compensation may take the form of either a salary and/or fee-for-service billings. The salary portion of the compensation is typically treated as a hospital cost, while the fee-for-service portion is treated as a physician expense. Thus, both hospital reimbursement and physician reimbursement policies are relevant to the issue of paying for teaching expenses. The first part of this section reports different third-party payers' general policies toward teaching expenses. This is followed by a report of Medicaid programs' specific policies.

General Policies of Third-Party Payers

Medicare (except in New Jersey and Maryland), 39 Medicaid programs, and 36 Blue Cross plans reimburse hospitals on the basis of reasonable costs. The general criteria for determining the reasonable cost of education are contained in the American Hospital Association's Financial Requirements of Health Care Institutions and Services.[6] In particular, the net cost of education, defined as the "direct and general service cost of approved educational activities (including stipends of trainees, compensation of teachers, and other costs) less any reimbursement from grants, tuition and donations received for educational purposes," is an allowable item for the purpose of reasonable-cost reimbursement.[7]

Medicare and Medicaid currently permit only one method of determining the share of reasonable costs which can be allocated to their beneficiaries.[8] Known as the departmental ratio of charges to charges applied to costs (DRCCAC) method, this approach requires the hospital to compute for each of

its departments the ratio of charges for program beneficiaries to charges for all patients. These fractions are then applied to the department's cost to obtain the shares which are paid by Medicare and Medicaid.

Eleven Medicaid programs have federal approval to diverge from Medicare procedures in determining reasonable costs.[9] One requirement imposed on these plans is that the reimbursement method actually used not result in payments greater than would have been made using the Medicare formula. Little is known about the specific treatment of educational expenses. New York attempted to disallow ten percent of residents' stipends on the grounds that this represented pure education not related to patient care. This policy has since been overturned by the courts.[10]

A number of states also have a variety of rate setting or prospective reimbursement systems for paying hospitals. According to one source, there are more than 35 such experiments under way.[11] Again, very little is known about the specific treatment of educational expenses.

Contracts between Blue Cross plans and participating hospitals are negotiated separately in each plan area. As noted above 36, or 50 percent of the plans pay reasonable costs, which include net educational expenses.[12] Of these plans, 22 compute costs on the basis of average per diem and 14 use variations of the RCC (Ratio of Charges to Charges) method.[13] In addition, 4 plans exclude both Medicare and Medicaid patients from cost computations, while another 10 exclude Medicare patients only.[14] If Medicare and Medicaid patients are responsible for a disproportionate share of hospital costs, then "carving-out" reduces the share of costs paid by Blue Cross.

The other 36 Blue Cross plans pay hospitals' charges, with 24 paying 100 percent of charges, nine paying betweeen 94 and 99 percent of charges, and the

remaining three using some other approach.[15] In practice, however, differences among the charge- and cost-based plans may be minimal. First, plans and hospitals frequently negotiate charges so that they are pegged to costs, ususally within a few percentage points of actual costs. Second, most of the cost-based plans impose a ceiling on payments, usually full charges or some fraction of charges.[16]

The fourth major source of hospitals' third-party revenue is payments from patients covered by commercial insurance companies. It is difficult to characterize the structure of commercial health insurance because of the large number of available policies. However, these plans typically indemnify the policy holder, who in turn is responsible for paying the hospital's full charges. Self-pay patients make up the residual source of a hospital's patient care revenues. Like most commercial insurance policy holders, they pay for care on the basis of the hospital's charges for specific services used.

It has been argued that charges to self-pay and commercially insured patients are established so that the hospital can meet its revenue requirements after accounting for revenues from other third-party sources. In effect, these patients bear part of the burden of supporting costs not allowed or not covered by other sources. (Nonoperating revenues pick up the rest.) Since net educational expenses are considered allowable costs, any inequities among payers in supporting education are the result of distortions in the formulas used to allocate costs (or charges) among insurers. Although most hospitals receive the majority of their revenues from insurers who pay their share of net educational expenses, hospitals' charges nevertheless play a key role in determining how costs are allocated among insurers. Should insurers change existing policies and move toward disallowing some or all education

expenses, then more of the burden of providing training revenues will fall upon nonoperating revenues and revenues from charge-paying patients. If bad debts and other collection problems are more prevalent for these patients, then all training programs, particularly those centered in outpatient settings, will probably experience financing difficulties.

Turning to physician reimbursement, most services provided by physicians to patients are reimbursed on a fee-for-service basis, except for certain hospital-based specialties.[17] Insurers differ, however, in their methods of determining the fee actually paid. The two most common approaches are the usual-customary-reasonable (UCR) method and the fixed fee or fee schedule method.[18] Even under the former, however, there may be wide variations in payments made by different insurers because of differences in the formula used to calculate the reasonable fee.[19] Fee schedules or schedules of maximum payments have in the past been both less generous and less frequently updated than UCR payments.

Since almost all insurers pay on a fee rather than a cost basis, two factors are relevant to assessing the implications of physician reimbursement policies for teaching expenses: (1) the level of fee payments and (2) any regulations which might disallow payments to teaching physicias (or residents). An important part of the second factor is determining when fees for such services are eligible for reimbursement. The study by the Institute of Medicine indicated that insurers differ in their documentation requirements for services provided by teaching physicians.[20] It seems obvious that a minimum requirement is that an identifiable service be provided. Much less clearcut, however, are questions of who is a teaching physician, what is education as opposed to patient care, and what is a private-patient and/or personal-physician relationship? Medicare's current guidelines are contained in Intermediary Letter 372 which states that in order to qualify for a professional fee, a teaching physician must:

> (1) review the patient's history and record of examinations and tests in the institution and make frequent reviews of the patient's progress; (2) personally examine the patient; (3) confirm or revise the diagnosis and determine the course of treatment to be followed; (4) either perform the physician's services required by the patient or supervise the treatment to assure that appropriate services are provided by interns, residents or others and that the care meets a proper quality level; (5) be present and ready to perform any service normally provided by an attending physician in a nonteaching setting when a major surgical procedure or a complex or dangerous medical procedure is performed; for the physician to be an "attending physician," his presence as an attending physician must be necessary (not superfluous as where, for example, the resident performing the procedure is fully qualified to do so) from the medical standpoint; (6) be recognized by the patient as his personal physician and be personally responsible for the continuity of the patient's care, at least throughout the hospital stay.[21]

New and more restrictive regulations were proposed under Section 227 of the 1972 Amendments to the Social Security Act. Because of the controversy and ambiguity inherent in trying to resolve by regulation the grey areas noted above, repeal of Section 227 was included in the Omnibus Reconciliation Act of 1980.

MEDICAID PROGRAMS' REIMBURSEMENT POLICIES FOR TEACHING EXPENSES

Very little is known about Medicaid programs' specific policies for the reimbursement of teaching expenses. This section reports the principal findings from The Urban Institute's survey of Medicaid programs.

The first issue we examined was whether Medicaid programs distinguish between teaching and nonteaching physicians for reimbursement purposes. Twenty-three reported that they do not consider a physician's teaching status in reimbursing for physicians' services. Of the remaining nineteen programs, none reported defining teaching physicians differently from Medicare. Furthermore, only ten of the nineteen programs which take account of teaching

status actually maintain lists of teaching physicians for each hospital. In six of these ten states, the Medicaid agency maintains the list, while in the other four it is kept by the fiscal agent and/or the Medicare intermediary. The nine programs which do not maintain lists presumably rely on hospital and/or physician self-identification if necessary. Table 1 summarizes the information on programs' policies with regard to identification of teaching physicians. It is apparent from these responses that most programs either do not consider important the issues of double billing by teaching physicians and of subsidizing medical education, or have not explicitly formulated policies to deal with them.

We next examined discounts, disallowances, or limits applied to teaching physicians' salaries or services. Nine programs reported that they reduce reimbursements for teaching physicians' salaries, although five of these simply follow Medicare's procedures. (Due to ambiguity in states' responses, some that reported no explicit Medicaid policy may still follow Medicare's procedures, which were outlined in the previous section.) Four states, Illinois, New York, South Carolina, and Wisconsin, treat only the patient-care component of teaching physicians' salaries as allowable costs. It appears, however, that it is hospitals' responsibility to allocate salaries between patient care and non-patient care activities, presumably in accordance with agreed upon accounting procedures. Finally, three additional states, Iowa, Mississippi, and Nebraska, do not recognize teaching physicians' educational salaries as allowable costs, but rather, reimburse teaching physicians only on a fee basis.

Most Medicaid programs permit teaching physicians to bill Medicaid directly for patient care services provided to Medicaid recipients in either outpatient or inpatient settings. The programs do require, however, that the

Table 1

Medicaid Programs' Policies for
Identifying Teaching Physicians, 1980

	Identifies Teaching Physicians (1)	Uses Medicare Definitions (2)	Maintains List of Teaching Physicians by Hospital (3)	Agency Which Maintains Lists (4)
Alabama	YES	YES	YES	MI
Arkansas	NO			
California	YES	YES	NO	
Colorado	YES	YES	NO	
Connecticut	NO			
Delaware	NO			
District of Columbia	NO			
Florida	NO			
Georgia	YES	YES	NO	
Hawaii	NO			
Illinois	NO			
Iowa	NO			
Kansas	YES	YES	YES	FA
Kentucky	NO			
Louisiana	YES	YES	YES	MI
Maine	YES	YES	NO	
Maryland	NO			
Massachusetts	YES	YES	NO	
Michigan	YES	YES	YES	MA
Mississippi	NO			
Missouri	NO			
Nebraska	YES	NR	YES	MA
New Hampshire	NO			
New Jersey	NO			
New Mexico	NO			
New York	YES	YES	YES	MA
North Carolina	YES	YES	YES	MA,FA
Ohio	YES	YES	YES	MA
Oklahoma	YES	YES	YES	MA
Oregon	YES	YES	NO	
Pennsylvania	NO			
Rhode Island	NO			
South Carolina	YES	YES	YES	MA
South Dakota	NO			
Tennessee	YES	YES	NO	
Texas	YES	YES	NO	
Utah	NO			
Vermont	NO			
Virginia	NO			
Washington	YES	YES	NO	
West Virginia	NO			
Wisconsin	NO			
TOTAL YES	19	18	10	--

KEY: NR - Not Reported
MA - Medicaid Agency
MI - Medicare Intermediary
FA - Fiscal Agent

Source: Urban Institute Survey of Medicaid Programs

physician personally provide an identifiable service which is not covered by the physician's salary. In addition, some states prohibit fee-for-service billing for services provided by salaried physicians and/or residents under teaching physicians' supervision. Of the states which do not permit direct billing, five states--New Hampshire, New York, Rhode Island, Vermont, and Florida (outpatient only)--also do not permit the hospital to submit a fee-for-service bill on the physician's behalf. Among states which do permit direct billing (and responded to a question on differences in fee levels), only Nebraska reported that teaching physicians receive a lower fee because educational activities are netted-out of the patient care fee. Table 2 summarizes the information collected on reimbursement of teaching physicians.

Turning to the reimbursement of house staff salaries, all responding programs except Mississippi treat residents' salaries as an allowable hospital cost.[22] However, the same four programs, Illinois, New York, South Carolina, and Wisconsin, which discounted teaching physicians' salaries also discount residents' salaries to reduce payments for educational activities. Another seven states follow Medicare's principles in determining whether to discount or disallow any portion of residents' salaries from allowable costs. (As noted above, some states that reported no discounts may also follow Medicare's principles for determining whether residents' stipends are allowable costs.) State-by-state information on policies toward residents' stipends is also reported in Table 2 (col. 4).

Overall, the great majority of Medicaid programs do not treat educational salaries or teaching physicians' patient care services any differently from other allowable costs or physicians' services. Three states, Mississippi, Nebraska, and Iowa do not include teaching physicians' salaries for educational activities as allowable costs, but reimburse for teaching physicians'

Table 2

Medicaid Programs' Policies for Reimbursing Teaching Physicians and Residents' Stipends, 1980

	Discounts/Disallows Physicians' Salaries for Educational Activities (1)	Permits Teaching Physicians to Bill Fee-for-Service (2)	Permits Hospitals to Bill Fee-for-Service (3)	Discounts/ Disallows Residents' Stipends (4)
Alabama	NO	YES		NO
Arkansas	NO	YES		NO
California	NO	YES		NO
Colorado	NO	NO	YES	NO
Connecticut	NO	YES		NO
Delaware	YES[1]	NO	YES	YES[1]
District of Columbia	NO	NO	YES	NO
Florida	NO	YES	NO[3]	NO
Georgia	NO	YES[4,5]		NO
Hawaii	NO	YES[4]		NO
Illinois	YES	YES[6]		YES
Iowa	NA[2]	NO	YES[7]	YES[1]
Kansas	YES[1]	YES[5]		YES[1]
Kentucky	NO	YES[5]		YES[1]
Louisiana	NO	YES[5]		NO
Maine	NO	YES		NO
Maryland	NO	YES[6]		NO
Massachusetts	NO	YES[4]		NO
Michigan	NO	YES		NO
Mississippi	NA[2]	YES[5]		NO
Missouri	NO	YES[4]		NO
Nebraska	NA[2]	YES[8]		NO
New Hampshire	NO	NO	NO	NO
New Jersey	NO	YES		NO
New Mexico	NO	YES		NO
New York	YES	NO	NO	YES
North Carolina	NO	NO	YES	NO
Ohio	YES[1]	YES		YES[1]
Oklahoma	NO	YES		NO
Oregon	YES[1]	YES		YES[1]
Pennsylvania	NO	YES		NO
Rhode Island	NO	NO	NO	NO
South Carolina	YES	YES[9]	YES[10]	YES
South Dakota	YES[1]	NR		YES[1]
Tennessee	NO	YES		NO
Texas	NO	YES[5]		NO
Utah	NO	NO	YES	NO
Vermont	NO	NO	NO	NO
Virginia	NO	YES		NO
Washington	NO	YES		NO
West Virginia	NO	YES[5]		NO
Wisconsin	YES	NO	YES	YES
TOTAL YES	9	30	8	11
TOTAL NO	30	11	5	31

Key: NA - Not Applicable
NR - Not Reported

Notes:
1. Follows Medicare principles.
2. Physicians not compensated by salary.
3. Outpatient only.
4. Salaried physicians excluded.
5. Must provide service directly; supervision excluded.
6. Only for services not covered by salary compensation.
7. Only institution can bill.
8. Teaching physicians receive lower fees.
9. Private patients only.
10. Facility patients only.

Source: Urban Institute Survey of Medicaid Programs

services through some type of fee method. Four states, Illinois, New York, South Carolina, and Wisconsin, report that they discount the salaries of residents and teaching physicians in order to exclude compensation for educational activities. Finally, five states, New Hampshire, New York, Rhode Island, Vermont, and Florida (outpatient only), do not permit either salaried teaching physicians or their hospitals (on their behalf) to submit fee-for-service bills for patient care services provided to Medicaid recipients. Fifteen states reported that they follow Medicare's principles for reimbursing both hospitals' and physicians' services in a teaching setting.

The general absence of explicit policies with regard to hospitals' teaching expenses suggests three possible inferences. States do not consider the issues of double billing or graduate medical education subsidy to be sufficiently important to warrant special policies; states have chosen to take a hands-off approach in order to help support graduate medical education, or at least not to interfere with it; or states have not had strong reasons to deal with teaching issues. In any case, the increased fiscal pressures placed on Medicaid programs by the Omnibus Reconciliation Act of 1981 may cause many of them to reexamine their policies, or more typically lack of policy, in this area.

HOSPITAL DATA ON MEDICAID'S REIMBURSEMENT POLICIES FOR TEACHING EXPENSES

This section presents information collected from hospitals on the extent of discounts and disallowances of educational expenses actually implemented by Medicaid programs. In order to provide a comparison, similar information for Blue Cross-Blue Shield plans is provided. These data are from a 1979 Urban Institute-American Hospital Association survey of hospitals with 100 or more beds.

Hospitals were asked a series of questions pertaining to documentation requirements for educational expenses, discounts or disallowances of residents' or teaching physician's educational salaries, and the percentage discount or disallowance. Table 3 reports the numbers of hospitals reporting discounts or disallowances and the average percent disallowed by state for Medicaid and Blue Cross-Blue Shield programs. Hospitals in nine states reported having some portion of both residents' stipends and teaching physicians' salaries disallowed or discounted by Medicaid. Hospitals in an additional eight states reported stipend discounts only, while four other hospitals (in four states) reported discounts of teaching physicians' salaries only. In contrast, hospitals in only eleven states indicated Blue Cross-Blue Shield discounts or disallowances of stipends or teaching physicians' salaries. Several hospitals reported having all of their teaching expenses disallowed by Medicaid. The average amounts discounted by Medicaid over all responding hospitals was twenty-five percent of residents' stipends and forty percent of teaching physicians' educational salaries. The average amounts discounted by Blue Cross-Blue Shield plans were of comparable magnitudes.

Among Medicaid programs, it is clear that only one, New York's, has applied a discount policy with any vigor. As mentioned above, the New York state rate setting commission applied an arbitrary discount of ten percent to residents' stipends. This cut applied to both Medicaid and Blue Cross. Teaching physicians' salaries were generally unaffected. Of hospitals in the states with explicit Medicaid policies to discount teaching expenses, none in South Carolina and only one in Illinois reported any Medicaid reimbursement cuts at all. In Wisconsin, the fourth state with an explicit Medicaid discount policy, four hospitals reported reimbursement reductions by Medicaid. Other hospitals with reduced Medicaid payments were in states that either

Table 3

Hospitals Reporting Discounts/Disallowances of Residents' Stipends or Teaching Physicians' Salaries by Medicaid or Blue Cross-Blue Shield, 1978-79 by State

		Medicaid				Blue Cross-Blue Shield			
	Number of Responding Hospitals[1] (1)	No. Reporting Stipend Discounts/ Disallowances (2)	Average Percent Discounted/ Disallowed (3)	No. Reporting Salary Discounts/ Disallowances (4)	Average Percent Discounted/ Disallowed (5)	No. Reporting Stipend Discounts/ Disallowances (6)	Average Percent Discounted/ Disallowed (7)	No. Reporting Salary Discounts/ Disallowances (8)	Average Percent Discounted/ Disallowed (9)
California	37	1	13	1	49	1	10		
Colorado	10	1	NR			1	44		
Florida	19	2	21	1	NR				
Illinois				1	NR				
Indiana	11	2	NR	1	NR				
Iowa	9	3	30	2	46	2	30	1	41
Kansas	4	1	100			1	NR		
Kentucky	7	1	15						
Louisiana	5	1	100	1	NR	1	NR	1	NR
Maine	3			1	NR				
Massachusetts	23	1	30						
Michigan	43							11	28
Missouri	23			1	25				
New Jersey	30	1	100	1	100				
New York	56	28	10	1	10	28	10	1	10
Ohio	39	1	100			1	100	5	81
Oregon	6	1	NR						
Pennsylvania	59	3	53	3	58	2	53	3	58
Rhode Island	3			1	30			1	30
Texas	20	3	33						
Washington	8	1	13						
Wisconsin	17	4	42	2	10				
Total, all states		55		17		35		23	
Avg. Reduction, all states (%)			25		40		18		50

Key: NR - Not Reported

Note: 1. The number of hospitals responding to salary questions is smaller because some teaching hospitals do not pay salaries. Also, item response rates vary slightly.

Source: 1979 Urban Institute-AHA Reimbursement Survey

reported that Medicaid follows Medicare principles, or did not report any explicit policies.

Table 4 reports by state the number of hospitals which indicated that they had been required to document teaching expenses (inpatient or outpatient) by either Medicaid or Blue Cross-Blue Shield. As can be seen, documentation requirements were more prevalent in inpatient than in outpatient settings, and more frequently reported for Medicaid than for Blue Cross-Blue Shield. However, the frequency of documentation requirements appears to have little relationship to the states' Medicaid policies regarding the reimbursement of teaching expenses.

In Table 5 we examine the question of whether states' actual behavior is related either to the size of hospitals' graduate medical education programs, hospitals' teaching status, or the share of hospitals' revenues from Medicaid. GME program size is measured by the number of residency positions offered. Teaching status is measured by four dichotomous variables which identify all hospitals which offer residency training but do not have any AMA-approved residency programs (OFF), hospitals which have at least one AMA-approved residency program but are not affiliated with a medical school (RES), hospitals which are affiliated with a medical school but are not members of the Council of Teaching Hospitals (AFF), and hospitals which are members of the Council of Teaching Hospitals (COTH). These teaching status variables are defined to be mutually exclusive, and may be interpreted as a crude indicator of the extent of a hospital's commitment to graduate medical education. The entries in the Table 5 are the proportions of hospitals which reported Medicaid or Blue Cross-Blue Shield discounts, disallowances, or documentation requirements.

Table 4

Hospitals Reporting Documentation Requirements for Educational Expenses by Medicaid or Blue Cross-Blue Shield, by Type of Care, 1978-79, by State

	Number of Responding Hospitals[1] (1)	Number Reporting Documentation Requirements: Medicaid Inpatient Care (2)	Medicaid Outpatient Care (3)	Blue Cross-Blue Shield Inpatient Care (4)	Blue Cross-Blue Shield Outpatient Care (5)
Alabama	10	4	4	3	3
Arkansas	5	1	1		
California	38	19	9	3	3
Colorado	10	2	2	2	2
Connecticut	8				
Delaware	2				
District of Columbia	8	3	1	3	1
Florida	20	7	6		
Georgia	11	2	2		
Illinois	32	6	5	2	1
Iowa	8	2	2	1	1
Kansas	4				
Kentucky	6	5	5		1
Louisiana	4	2	2		
Maine	3	1	1	1	1
Maryland	13	5	5	3	3
Massachusetts	24	5	5	4	4
Michigan	43	14	14	15	14
Minnesota	13	2	2		
Mississippi	2	1	1		
Missouri	23	6	4	3	3
Nebraska	3				
Nevada	1				
New Hampshire	1				
New Jersey	31	13	11	12	12
New Mexico	1	1	1		
New York	52	15	15	15	14
North Carolina	7	3	3		
Ohio	40	13	13	9	8
Oklahoma	4	1			
Oregon	5				
Pennsylvania	57	18	10	20	19
Rhode Island	3	2	2	2	2
South Carolina	4	3	3		
South Dakota	3				
Tennessee	13	6	6	2	2
Texas	21	4	4		
Utah	3	1	1		
Vermont	1				
Virginia	8	2	2	2	2
Washington	8	2	2	2	2
West Virginia	5				
Wisconsin	16	4	4		
Total, all states	596	177	149	105	98

Note: 1. Item response rates vary slightly.

Source: 1979 Urban Institute-AHA Reimbursement Survey.

Table 5

Percentage Distributions of Hospitals Reporting Discounts/ Disallowances or Documentation Requirements by Program Size, by Teaching Status, and by Share of Revenues from Medicaid, 1978-79

	Number of Responding Hospitals[1] (1)	Medicaid				Blue Cross-Blue Shield			
		Discounts/Disallowances		Documentation		Discounts/Disallowances		Documentation	
		Residents' Stipends (2)	Physicians' Salaries (3)	Inpatient Care (4)	Outpatient Care (5)	Residents' Stipends (6)	Physicians' Salaries (7)	Inpatient Care (8)	outpatient Care (9)
A. GME Program Size (No. of Res. Positions Offered)									
1-5	59	8.5%	3.7%	10.2%	6.9%	3.4%	0.0%	3.4%	3.4%
5-10	40	5.0	0.0	28.9	26.3	0.0	4.2	14.6	14.6
10-20	89	11.2	9.7	24.4	21.1	6.9	7.9	15.4	13.2
20-50	136	8.8	3.5	26.3	23.0	5.1	3.5	12.9	12.9
50-100	117	8.5	3.0	35.0	27.8	5.9	6.1	28.0	27.4
100+	125	12.0	3.8	42.6	36.4	10.4	6.3	22.5	19.7
B. Teaching Status									
OFF	90	7.8	6.3	24.7	21.6	2.3	2.1	13.3	12.2
RES	53	17.0	4.9	27.8	24.1	13.0	7.0	25.5	25.5
AFF	226	8.8	3.1	28.8	26.0	4.4	3.1	15.9	14.7
COTH	228	8.3	4.2	33.5	26.6	7.0	8.3	19.2	18.0
C. Share of Revenues from Medicaid									
LT 5%	76			25.0	23.7			14.3	14.3
5-10	97			23.7	20.6			18.6	17.5
10-15	39			28.2	26.3			17.9	12.8
15-20	22			22.7	22.7			13.6	14.3
20-25	17			35.6	29.4			12.5	12.5
GT 25%	19			42.1	31.6			22.2	22.2

Note: 1. Item response rates very slightly

Source: 1979 Urban Institute - AHA Reimbursement Survey

Looking first at the distributions by program size, it appears that the frequencies of either Medicaid or Blue Cross-Blue Shield discounts/ disallowances are not closely related to program size. The largest GME programs, offering 100 or more positions, were most likely to report stipend discounts--12 percent by Medicaid and 10.4 percent by Blue Cross-Blue Shield. However, the next highest frequency of stipend discount occurred in hospitals offering from 10 to 20 residency positions. The patterns of salary discounts also show little relationship to program size. Finally, documentation requirements were reported most frequently for the two largest program size categories for both inpatient and outpatient care and both Medicaid and Blue Cross-Blue Shield. The smallest programs had the lowest frequency of documenting teaching expenses, from 3.4 to 10.2 percent depending on payer and type of care. Hospitals offering from 5 to 10, 10 to 20, or 20 to 50 residency positions had about the same frequency of reporting, roughly 25 percent for Medicaid and 14 percent for Blue Cross-Blue Shield.

Grouping hospitals by teaching status (Panel B of Table 5) also fails to reveal any clearly systematic relationship between Medicaid policies and the extent of commitment to graduate medical education. Teaching hospitals which have no AMA-approved residency programs reported the highest frequency of having teaching physicians' educational salaries discounted or disallowed by Medicaid. However, these same hospitals reported the lowest frequencies of Medicaid stipend discounts/disallowances and documentation requirements for educational expenses. The comparison data on Blue Cross-Blue Shield also show little relationship between teaching status and reimbursement policies for educational expenses.

Examination of data for hospitals grouped by the share of revenues from Medicaid was possible only for Medicaid documentation requirements.[23]

Hospitals which received more than twenty percent of their revenues from Medicaid were more likely to document their teaching expenses than hospitals receiving less than twenty percent of their revenues from Medicaid. Among the latter group, however, there does not appear to be a systematic relationship between reporting requirements and the share of revenues from Medicaid. The proportion of hospitals reporting Blue Cross-Blue Shield documentation requirements is also presented for comparison purposes. Not surprisingly, there is no apparent relationship to the share of revenues from Medicaid. As in the comparison by program size and teaching status, Blue Cross-Blue Shield plans seem to require hospitals to document teaching expenses about 60 percent less often than Medicaid programs.

In general, the data reported by hospitals corroborate the basic finding from the survey of Medicaid programs. Except for New York, the great majority of teaching hospitals did not experience any discounts or disallowances of teaching expenses for Medicaid. Almost half of the hospitals reporting Medicaid discounts were in New York, which had imposed an arbitrary ten percent reduction on residents' stipends for the purpose of computing allowable costs. Of the non-New York hospitals reorting discounts or disallowances, about 20 percent did not have any AMA-approved training programs. Their teaching costs were presumably disallowed under Medicare principles. In the three states other than New York which have explicit Medicaid policies to reduce the reimbursement of teaching expenses, only four hospitals, all in Wisconsin, reported teaching expense discounts/disallowances. (Thirteen teaching hospitals in Wisconsin did not report any such discounts.) In only three other states, Pennsylvania, Iowa, and Texas, did as many as three teaching hospitals indicate that Medicaid had discounted or disallowed teaching expenses.

MEDICAID PAYMENTS AND TEACHING HOSPITALS

This section reports data on the interrelationships among Medicaid payments, hospitals' revenues, and hospitals' teaching expenses. The goal is to provide information pertinent to questions such as: How important are Medicaid revenues to teaching hospitals? Are teaching costs a significant component of Medicaid payments to hospitals? Are teaching hospitals responsible for a large share of Medicaid hospital payments? In which states are teaching hospitals likely to be hardest hit by potential Medicaid cuts? This type of information will help provide additional perspective for evaluating Medicaid programs' current policies and for predicting the consequences of possible future policies.

The first question we address is the importance of Medicaid to teaching hospitals. Table 6 reports data on the percentage distribution of hospitals' revenue sources by teaching status and control (public or private) for two years, 1978 and 1979. Teaching hospitals are defined as those with at least one AMA-approved residency program.[24] (Public hospitals exclude federal hospitals; private hospitals exclude for-profit institutions.) The data for 1979 are from The Urban Institute-AHA survey described above. The 1978 data were collected by the American Hospital Association in a survey of all hospitals.

Focusing on the share of hospitals' revenues from the Medicaid program, one difference stands out clearly: public teaching hospitals are about 2.4 times more dependent on Medicaid as a revenue source than any other type of hospital. At the same time, public hospitals which do not have teaching programs derive approximately the same proportion of their revenues from Medicaid as do private hospitals, both teaching and nonteaching. In fact,

Table 6

Percentage Distributions of Revenue Sources by
Payer, Teaching Status, and Control, 1977-78 and 1978-79

	Teaching Hospitals				Nonteaching Hospitals				All Hospitals	
	Public[1]		Private[2]		Public[1]		Private[2]			
	1977-78	1978-79	1977-78	1978-79	1977-78	1978-79	1977-78	1978-79	1977-78	1978-79
Medicaid	18.4%	17.9%	7.8%	7.7%	7.7%	7.8%	7.4%	7.3%	8.0%	7.7%
Medicare	24.7	25.4	31.8	32.7	36.8	33.5	34.1	34.9	33.6	32.9
Blue Cross-Blue Shield	14.5	12.8	24.4	22.9	16.7	16.2	20.5	17.8	20.5	20.1
Commercial Insurance and Self Pay	23.6	24.1	32.4	29.1	33.7	34.3	35.0	32.7	33.7	31.5
All Other Revenues	18.8	19.8	3.6	7.6	5.1	8.2	3.0	7.3	4.2	7.8
No. of Hospitals	(49)	(63)	(242)	(245)	(174)	(125)	(665)	(604)	(1130)	(1038)

Notes: 1. Excludes federal hospitals
2. Excludes for-profit hospitals

Sources: 1979 Urban Institute-AHA Reimbursement Survey
1978 AHA Selected Topics Survey

except for public teaching hospitals, the distributions of revenues by payment source are surprisingly similar in the other three groups of hospitals.

In addition to being more dependent on Medicaid, public teaching hospitals also received a much larger share of their revenues from the OTHER category than did any other group of hospitals. A finer breakdown of this last category is not possible for 1979. Although not reported here in detail, the 1978 data indicate that about three-quarters of public teaching hospitals' other revenues were appropriations and grants from state and local governments.

The significance of teaching costs to the Medicaid program depends on several factors: the ratio of teaching expenses to total hospital costs, the proportion of Medicaid payments going to teaching hospitals, and the distributions of teaching expenses and Medicaid payments across states. Tables 7 and 8 present data on these factors for 1979. Table 7 shows the distributions across states of teaching hospitals' stipend expenses and Medicaid revenues, and within each state, the ratios of teaching expenses (stipends plus salaries paid to physicians for educational activities) and Medicaid revenues to total revenues. These data are only from hospitals which responded to our 1979 survey and may thus contain some bias due to differences between responding and nonresponding hospitals. Furthermore, the number of hospitals which reported valid data for both teaching expenses and revenue sources is about half the number of hospitals which provide data on either one or the other.

Looking first at the distributions of stipends and Medicaid payments across states (columns 1 and 2), it is clear that both are distributed very unevenly. Hospitals in two states, New York and California, account for thirty-one percent of all stipend expenses and thirty-four percent of all Medicaid payments. Seven states (Illinois, Michigan, New Jersey, Ohio, and

Table 7

Percentage Distributions of Residents' Stipends and Medicaid Revenues, and Ratios of Medicaid Revenues and Teaching Expenses to Total Revenues, Teaching Hospitals, by State, 1978-79

	Percentage Distributions Across All States		Ratios Within States (expressed as %)	
	Residents' Stipends (1)	Teaching Hospitals' Medicaid Revenues (2)	Medicaid Revenues to Total Revenues (3)	Teaching Expenses[1] to Total Revenues (4)
Alabama	0.58%	1.09%	6.65%	0.47%
Arizona	0.68	NA	NA	NR
Arkansas	0.29	0.33	25.43	9.69
California	13.26	13.91	14.79	3.92
Colorado	1.18	0.54	2.48	1.87
Connecticut	1.03	1.18	7.63	2.95
Delaware	0.03	NR	NR	NR
District of Columbia	6.97	1.63	18.20	3.91
Florida	3.75	1.75	3.86	1.78
Georgia	0.73	1.20	12.74	7.81
Illinois	4.42	7.84	12.13	3.70
Indiana	0.69	0.71	5.83	2.22
Iowa	1.03	0.64	4.75	4.73
Kansas	0.21	0.44	9.34	3.82
Kentucky	5.08	1.00	13.68	33.31
Louisiana	0.38	0.45	6.67	1.83
Maine	0.37	0.41	8.45	3.01
Maryland	1.90	4.02	9.76	8.04
Massachusetts	2.70	3.29	7.80	3.71
Michigan	5.04	8.46	12.09	4.10
Minnesota	2.89	1.71	9.61	3.09
Mississippi	0.23	0.40	21.58	24.93
Missouri	1.89	0.90	2.18	5.39
Nebraska	0.03	0.43	1.81	0.57
New Hampshire	0.22	0.05	3.27	6.71
New Jersey	6.16	2.58	7.14	3.74
Mew Mexico	0.33	0.29	NR	NR
New York	17.38	20.65	22.73	13.14
Nevada	0.02	NR	NR	NR
North Carolina	2.26	1.83	9.77	6.90
North Dakota	0.03	0.18	5.41	0.33
Ohio	6.57	4.92	8.44	3.41
Oklahoma	0.22	0.36	4.56	0.87
Oregon	1.01	0.59	8.59	3.03
Pennsylvania	5.26	7.74	11.07	4.11
Rhode Island	0.19	0.22	5.69	4.54
South Carolina	0.45	0.34	NR	NR
South Dakota	0.06	0.10	5.39	1.41
Tennessee	0.84	1.42	6.45	2.03
Texas	1.39	2.05	6.14	2.60
Utah	0.66	0.19	4.93	8.35
Vermont	0.20	0.13	NR	NR
Virginia	0.44	0.71	NR	NR
Washington	0.34	1.08	13.07	1.29
West Virginia	1.57	0.47	5.88	1.92
Wisconsin	1.45	1.71	9.06	5.94
All Hospitals				
Total Percent	100	100	—	—
Average Percent	—	—	11.15	5.28
No. of Responding Hosps.	565	584	261	261

Key: NR - Not Reported
NA - Not Applicable (Arizona does not have a Medicaid program.)

Note: 1. Includes residents' stipends and teaching physicians' educational salaries.

Source: 1979 Urban Institute - AHA Reimbursement Survey.

Pennsylvania in addition to New York and California) rank among the ten largest states in both distributions. Together the seven are responsible for fifty-eight percent of stipend expenses and sixty-six percent of Medicaid payments to teaching hospitals.

In terms of the importance of Medicaid payments and teaching expenses to hospital revenues (columns 3 and 4), New York again stands out, with 22.7 percent of hospitals' revenues coming from Medicaid, and teaching expenses equal to 13.1 percent of revenues. The averages for all responding hospitals are 11.2 percent of revenues from Medicaid and teaching expenses equal to 5.3 percent of revenues. Hospitals in three other states, Kentucky, Mississippi, and Arkansas, reported ratios similar to or larger than New York's, but these data represent only four hospitals in Kentucky and one each in Arkansas and Mississippi. In most states, even those with large Medicaid programs, teaching expenses are relatively small compared to hospitals' total revenues. Wisconsin, which is one of the four states with an explicit Medicaid policy for discounting teaching expenses, is similar to New York in that hospitals' teaching expenses are large relative to their Medicaid payments. Of the other two states with such policies, teaching expenses are small relative to Medicaid payments in Illinois, and no data is available for South Carolina.

Table 8 examines the importance of teaching hospitals to Medicaid programs. For each state, the table reports the percentage distribution of total Medicaid payments to responding hospitals among public teaching, private teaching, and nonteaching hospitals. (Columns 3 and 5 distribute Medicaid payments between nonteaching and teaching hospitals; columns 7 and 9 break down payments to teaching hospitals by type of control.) Overall, teaching hospitals received 69.4 percent of total Medicaid payments to short-term general hospitals. Private teaching hospitals accounted for 44.9 percent and

Table 8

Percentage Distribution of Medicaid Hospital Payments by Hospital Control and Teaching Status, by State, 1978-79

		Nonteaching Hospitals		Teaching Hospitals					
				Public and Private		Private Control		Public Control	
	Total Responding Hospitals (1)	Number (2)	Share of Total Medicaid Payments (3)	Number (4)	Share of Total Medicaid Payments (5)	Number (6)	Share of Total Medicaid Payments (7)	Number (8)	Share of Total Medicaid Payments (9)
Alabama	27	13	21.9	14	78.1	9	24.0	5	54.1
Arkansas	26	21	42.3	5	57.7	4	22.3	1	35.4
California	137	107	41.4	30	58.6	22	33.0	8	25.6
Colorado	19	10	24.5	9	75.5	5	22.1	4	53.4
Connecticut	12	2	5.3	10	94.7	9	7.2	1	87.5
Delaware	5	NR	NR	NR	NR	NR	NR	NR	NR
District of Columbia	6	0	0.0	6	100.0	6	100.0	NR	NR
Florida	72	56	33.8	16	56.2	8	8.9	8	47.3
Georgia	40	32	35.6	8	64.4	3	9.4	5	55.0
Illinois	122	81	34.9	41	65.1	37	42.2	4	22.9
Indiana	52	40	35.8	12	54.2	11	39.3	1	14.9
Iowa	38	25	37.4	13	72.6	11	47.9	2	24.7
Kansas	29	26	49.0	3	51.0	3	51.0	NR	NR
Kentucky	29	21	39.6	8	60.4	6	28.6	2	31.8
Louisiana	31	22	44.3	9	55.7	5	22.2	4	33.5
Maine	7	4	23.1	3	76.9	3	76.9	NR	NR
Maryland	32	16	16.8	16	83.2	14	61.1	2	21.6
Massachusetts	65	43	36.4	22	63.6	19	56.7	3	6.9
Michigan	100	70	32.0	30	68.0	25	54.1	5	13.9
Minnesota	46	30	16.5	16	82.5	14	51.3	2	31.2
Mississippi	22	19	48.3	3	51.7	2	4.2	2	47.5
Missouri	40	27	45.6	13	54.4	11	37.7	2	16.7
Nebraska	21	13	17.1	8	82.8	6	51.5	2	31.3
New Hampshire	10	9	82.1	1	17.9	1	17.9	NR	NR
New Jersey	62	39	33.2	23	66.8	21	58.4	2	8.4
New Mexico	8	6	45.5	2	54.5	1	14.9	1	39.6
New York	111	61	9.5	50	90.5	39	47.6	11	42.9
North Carolina	53	42	33.8	11	66.2	6	34.4	5	31.8
North Dakota	8	2	4.7	6	95.3	6	95.3	NR	NR
Ohio	101	71	38.4	30	71.6	28	53.6	2	18.0
Oklahoma	29	24	50.0	5	50.0	2	24.4	3	25.6
Oregon	22	17	49.3	5	50.7	4	26.1	1	24.6
Pennsylvania	137	85	38.5	52	71.5	50	70.0	2	1.5
Rhode Island	8	5	43.3	3	56.7	3	56.7	NR	NR
South Carolina	15	12	48.1	3	51.9	NR	NR	3	51.9
South Dakota	16	13	43.9	3	56.1	3	56.1	NR	NR
Tennessee	37	21	18.6	16	81.4	10	26.2	6	55.2
Texas	102	77	38.1	25	61.8	17	39.3	8	22.5
Utah	3	0	0.0	3	100.0	2	32.6	1	67.4
Vermont	6	4	35.6	2	64.4	2	64.4	NR	NR
Virginia	40	30	49.1	10	50.9	10	50.9	NR	NR
Washington	25	15	37.2	10	62.8	9	43.6	1	19.2
West Virginia	17	11	39.7	6	60.3	4	37.8	2	22.5
Wisconsin	62	38	42.1	14	57.9	12	37.4	2	20.5
All Hospitals	1872	1296	30.6	576	69.4	463	44.9	113	24.5

Key: NR - Not reported or not applicable.

Source: 1979 Urban Institute - AHA Reimbursement Survey

public teaching hospitals for 24.5 percent of the total. The former's larger share is due to the fact that there are more than four times as many private teaching hospitals as public teaching. Turning to the data for individual Medicaid jurisdictions, teaching hospitals received all reported Medicaid payments in two, the District of Columbia and Utah. Other states in which teaching hospitals received a higher than average share of Medicaid hospital payments were Maine, Connecticut, New York, Pennsylvania, Maryland, Ohio, Tennessee, Alabama, Minnesota, Iowa, North Dakota, Nebraska, and Colorado. New York, Pennsylvania and Ohio are among the states with the largest Medicaid programs and the greatest concentration of teaching programs. Only in two states, New Hampshire and Idaho, which have among the smallest teaching and Medicaid programs, did teaching hospitals receive less than fifty percent of Medicaid payments.

In thirteen states, all in the South or Mountain regions, public teaching hospitals received more Medicaid payments than did private teaching hospitals and in eight of the thirteen states they also received more Medicaid payments than nonteaching hospitals. Except for Florida, which ranked tenth in its share of national stipend payments (see Table 7), none of the thirteen states have either large concentrations of teaching programs or large Medicaid programs. The dominance of public hospitals in these states in part reflects their relatively greater concentration than in other states: public hospitals comprised 12.6 percent of all hospitals which reported Medicaid revenue data, as compared to only 4.5 percent of hospitals in other states. In general, it is fairly clear that teaching hospitals, especially publicly controlled teaching hospitals, provide a major share of inpatient and outpatient hospital services to Medicaid recipients in almost every state.

The information reported in Table 8 clearly shows that teaching hospitals are the major recipient of Medicaid payments to hospital. However, Table 7 indicates that in most states hospitals' direct educational expenses are small relative to their total costs. It would seem then that except in New York, Wisconsin, and possibly a few other states with the largest ratios of teaching expenses to total hospital expenses, Medicaid programs would save very little by attempting to reduce payments for teaching expenses. Conversely, teaching programs, especially those in public hospitals, might be very hard hit by any reductions in Medicaid payments because of public teaching hospitals' disproportionate dependence on Medicaid revenues.

Medicaid programs do, however, have legitimate reason to be concerned about teaching hospitals' total expenses, rather than hospitals' teaching expenses. Table 9 reports data on average total expense per adjusted patient day for hospitals grouped by ownership, beds, and teaching status. (All data are from the American Hospital Association's 1979 Annual Survey of Hospitals.) As can be readily seen, average expense per adjusted patient day is almost forty percent higher in teaching than in nonteaching hospitals. Among teaching hospitals, public institutions are about twenty-three percent more costly per adjusted day than private hospitals. The least costly group of hospitals is public nonteaching which had an average expense per adjusted patient day of $164, fully forty percent lower than in public teaching hospitals.

Although these differences are striking, one should be very cautious about attributing all, or even a major portion of the cost differentials solely to the presence of teaching programs. Compared to nonteaching hospitals, teaching hospitals treat a more complex mix of cases;[25] teaching hospitals typically provide a broader range of services and facilities; and

Table 9

Average Total Expense per Adjusted Patient Day by Ownership, Beds, and Teaching Status, 1979

	N	Expense per Adjusted Patient Day[1]
All Hospitals	2,237	$212
LT 100 Beds	1,153	159
100-299 Beds	682	190
300+ Beds	402	236
All Nonteaching	1,855	179
Private	460	197
LT 100 Beds	137	169
100-299 Beds	237	195
300+ Beds	89	205
Public	1,378	164
LT 100 Beds	1,011	156
100-299 Beds	342	163
300+ Beds	39	183
All Teaching	382	247
Private	218	226
LT 100 Beds	1	162
100-299 Beds	45	209
300+ Beds	172	228
Public	164	277
LT 100 Beds	4	258
100-299 Beds	58	268
300+ Beds	102	279

Note: 1. Adjusted patient days are the weighted total of inpatient days and outpatient visits. Weights are based on revenues from the two types of care.

Source: American Hospital Association, 1979 Annual Survey of Hospitals

teaching hospitals employ more salaried physicians.[26] The last factor alone would tend to distort teaching-nonteaching comparisons, since many services performed by salaried physicians and residents in teaching hospitals are performed by attending physicians, who typically bill outside of the hospital's accounts, in nonteaching hospitals. Inadequate data have precluded any large-scale studies of this issue. However, three selected analyses have suggested that when "off-budget" items, like private physicians' billings, are taken into account, differences in expenses between teaching and nonteaching hospitals tend to disappear.[27] Full resolution of the cost-difference issue is clearly beyond the scope of this paper.[28] However, these comments should alert the reader to the danger of drawing strong conclusions from data such as those in Table 9.

SUMMARY AND IMPLICATIONS

The goal of this paper was to provide information on current Medicaid policies for the reimbursement of hospitals' teaching expenses and on the interrelationship between Medicaid payments and teaching hospitals' teaching expenses and total revenues. The information reported was collected primarily from two surveys: an Urban Institute survey of Medicaid programs conducted in 1980, and an Urban Institute-AHA hospital survey conducted in late 1979. Additional data were from a 1978 AHA Special Topics hospital survey and the 1979 AHA Annual Survey of Hospitals.

The paper's principal findings can be readily summarized. Most Medicaid programs do not have explicit policies to reduce or disallow teaching expenses. Only four Medicaid programs, New York, Illinois, South Carolina, and Wisconsin, reported that for the purpose of computing allowable costs, they reduce either residents' stipends or teaching physicians' educational

salaries, generally on the grounds that they do not pay for pure education or research. Other Medicaid programs either follow Medicare principles or do not make any distinctions among hospitals or physicians on the basis of teaching activities.

Data collected from hospitals generally corroborated these findings. Only in New York did more than four hospitals report any Medicaid discounts or disallowances of teaching expenses. In two states, Illinois and South Carolina, in which the Medicaid programs claimed they had policies to limit reimbursement of teaching expenses, no hospital indicated any such reductions. Overall, only above five percent of hospitals reported Medicaid discounts or disallowances of teaching expenses. Some of these were hospitals with small teaching programs not approved by the AMA. Nevertheless, there did not seem to be any systematic relationship between the size of a hospital's teaching program or the extent of its commitment to graduate medical education, and the frequency or likelihood of having teaching expenses reduced by Medicaid.

In order to provide a context for evaluating these policies, data on the interrelationships between hospitals' total revenues, teaching expenses, total expenses and Medicaid programs' hospital payments were examined. These data showed that in almost every state, teaching hospitals receive the bulk of Medicaid payments to short-term general hospitals. Furthermore, public teaching hospitals, although relatively small in number, have a disproportionately large role in both training future physicians and providing services to Medicaid recipients. On average, teaching programs in public hospitals are about 2.5 times larger than in private hospitals,[29] and public hospitals are about 2.5 times more dependent on Medicaid as a revenue source than are private teaching (and all nonteaching) hospitals. In addition, public teaching

hospitals are much more reliant than other hospitals on grants and appropriations from state and local governments. Finally, the distributions among states of both teaching expenses and Medicaid payments to teaching hospitals are highly skewed. The ten largest states in each distribution account for about 75 percent of all teaching expenses and all Medicaid payments. Six states, New York, California, Ohio, Michigan, Illinois, and New Jersey, rank in the top ten in both teaching expenses and Medicaid payments. In New York in particular, which accounts for about 20 percent of both national teaching expenses and Medicaid payments to teaching hospitals, Medicaid payments to teaching hospitals, Medicaid payments and teaching expenses are especially large relative to hospitals' total revenues.

What implications can be drawn for the future? As is well known, the federal government recently legislated across-the board cuts in its share of Medicaid expenses. In addition, many states, especially those in the declining North-Central and Northeastern regions, face large Medicaid deficits and limited revenue-raising opportunities. The data presented here suggest that the federal cuts will hit hardest those states with the largest Medicaid programs. (These states also tend to have the lowest federal matching rates, so a reduction of a fixed number of percentage points in the federal share is in reality a larger relative cut for these states than for states with higher matching rates.) Given the importance of teaching hospitals to Medicaid payments, it seems highly probable that at least a share of these cuts will take the form of lower Medicaid payments to teaching hospitals. Again, the impact is likely to be uneven, with public teaching hospitals bearing more of a reduction than other hospitals. At the same time, many public teaching hospitals will be facing potentially lower appropriations from state and local governments because of the latter's own fiscal contraints.

Interest in focusing Medicaid cuts on teaching expenses and teaching hospitals is likely to increase because of the arguments, whether true or not, that Medicaid should not "pay for education" and because teaching hospitals are clearly more expensive than nonteaching hospitals. In the short run, this will indeed lower Medicaid programs' expenditures. However, adopting a more restrictive policy on Medicaid payments to teaching hospitals raises other difficult problems. First, such cuts would likely be more burdensome for public teaching hospitals. Thus, the cuts would amount to a beggar-thy-neighbor policy which shift some of the costs of providing hospital services for the poor from the federal and state governments (Medicaid) to the local government. Given the fiscal pressures that many localities, particularly those with large proportions of low-income persons, face, odds are that many public hospitals will not be able to substitute other revenues for reduced Medicaid payments and would have to offer fewer services. Second, even if local governments did fully compensate for Medicaid cuts, the shift in revenue sources--from federal and state to local--will typically be from more progressive to less progressive revenue-raising methods. Consequently, the amount of income redistribution implicit in a program like Medicaid will be reduced. Third, across-the-board cuts in Medicaid reimbursement of teaching expenses would increase private teaching hospitals' incentives to either admit fewer Medicaid patients or to transfer them more quickly to public hospitals. These types of patient shifts will compound the impact on public hospitals of their reduced Medicaid payments.

Over time, general reductions in Medicaid spending and especially Medicaid reductions in reimbursement of teaching expenses will lead hospitals to offer fewer graduate medical education positions (unless funds from other sources are increased).[30] This in turn has two consequences. One, clearly,

is reduced capacity in the graduate medical education system. Given projections of reduced medical school enrollment and of a potential surplus of physicians, this result may not be undesirable from either educational or public policy perspectives. The other consequence, however, is that teaching hospitals are likely to hire other personnel, salaried physicians, nurses, and technicians, to compensate for the reduced complement of residents. Since the costs of these new personnel cannot be excluded from allowable cost computations on the grounds that they are educational expenses, it is not at all clear that Medicaid programs' expenditures would ultimately be reduced by targeting some cuts explicitly on teaching expenses.

Medicaid programs clearly have reason to be concerned about payments to teaching hospitals and whether teaching hospitals are the most appropriate setting for providing services to Medicaid recipients. Just as clearly, though, what to do about these concerns extends beyond the question of how Medicaid reimburses teaching expenses. The issues of how to finance graduate medical education and health care for the poor are clearly beyond the scope of this brief paper.[31] It is hoped, however, that the information provided here offers an improved framework for discussing and evaluating specific Medicaid policies.

Footnotes

1. For a fuller discussion, see J. Hadley and P. Tigue, "Financing Graduate Medical Education: An Update and a Suggestion for Reform," Health Policy and Education (forthcoming, 1982) and R. Knapp and P. Butler, "Financing Graduate Medical Education," New England Journal of Medicine 301 (October 4, 1979), pp. 749-55.

2. Hadley and Tigue, op. cit.

3. For a more thorough analysis of this issue, see R. Feldman and S. Yoder, "A Theoretical Analysis of GME Financing," in J. Hadley, ed., Medical Education Financing (New York: Prodist), 1980.

4. See Knapp and Butler, p. 752.

5. Ibid., p. 750.

6. See H. Berman and L. Weeks, The Financial Management of Hospitals (Ann Arbor, Michigan: Health Administration Press, 1979), p. 175.

7. Commerce Clearing House, Medicare-Medicaid Guide (New York: Commerce Clearing House, Inc., 1974), p. 1761.

8. Berman and Weeks, pp. 180-81.

9. Medicare/Medicaid Management Institute, Health Care Financing Administration, USDHEW, Data on the Medicaid Program: Eligibility, Services, Expenditures (Baltimore, Maryland: Health Care Financing Administration, 1979), pp. 21-2.

10. Knapp and Butler, p. 750.

11. Berman and Weeks, p. 142.

12. F. Liddell, "Blue Cross Contract Provisions as of June 30, 1976," Division of Financial Management, American Hospital Association, mimeo, January 1977, p. 3.

13. Ibid., p. 4.

14. Ibid.

15. Ibid., p. 3.

16. Ibid., Table 2.

17. For a discussion of reimbursement of hospital-based specialists, see B. Steinwald, "Hospital-Based Physicians: Current Issues and Descriptive Evidence," Institute of Public Policy Studies, Vanderbilt University, mimeo, June 1979: Arthur Andersen and Co., Study of Reimbursement and Practice Arrangements of Provider-Based Physicians. Final Report to the Health Care Financing Administration, December, 1977.

18. The customary-prevailing-reasonable method used by Medicare is essentially identical to UCR except for differences in terminology.

19. For more information, see J. Showstack et al., "Fee-for-Service Physician Payment: Analysis of Current Methods and Their Development," Inquiry XVI (Fall 1979): 230-246.

20. Cited in Knapp and Butler, "Financing Graduate Medical Education," pp. 752-3.

21. Ibid, p. 752.

22. By agreement, all physicians' services provided by residents and teaching physicians are paid for on a fee-for-service basis at the statewide fee schedule for all physicians' services. Any salaried compensation is deducted in computing allowable costs for Medicaid hospital reimbursement.

23. The number of hospitals which reported stipend or salary discounts and complete financial data was too small for meaningful analysis. Eighteen reported stipend discounts and 6 reported salary discounts.

24. Other definitions of teaching status had only minor effects on the percentage distributions.

25. E. Becker and B. Steinwald, "Determinants of Hospital Casemix Complexity," Health Services Research (forthcoming, 1982).

26. R. Feldman, F. Sloan, and L. Paringer, "Compensation Arrangements Between Physicians and Hospitals," Bell Journal of Economics (1981); Hadley and Tigue, op. cit.

27. J. Hosek and A. Massell, "Teaching and Hospital Costs: The Case of Radiology," paper no. P-5586, Rand Corporation, Santa Monica, Ca., June 1976; C. Neu, "The Program Cost of Inpatient Care in Teaching and Nonteaching Hospitals: An Analysis of Inpatient Costs for Medicaid Patients," paper no. WN-9542-HEW, the Rand Corporation, Santa Monica, Ca., July 1976; J. Freymann and J. Springer, "Cost of Hospital-Based Education: The Hartford Hospital Study," Hospitals 47 (March, 1973), pp. 65-74.

28. See F. Sloan, R. Feldman, and B. Steinwald, "Effects of Teaching on Hospital Costs," unpublished paper, Institute for Public Policy Studies, Vanderbilt U., Nashville, Tenn., September, 1981.

29. Hadley and Tigue, op. cit.

30. See J. Hadley and R. Lee, "The Demand for Residents," Urban Institute Working Paper, in progress, 1981.

31. See Hadley and Tigue for a discussion of the former. For discussions of the latter, see J. Feder, J. Holahan, and T. Marmor, eds., National Health Insurance: Conflicting Goals and Policy Choices (Washington, D.C., The Urban Institute, 1980) and J. Feder, J. Hadley, and J. Holahan, Insuring the Nation's Health (Washington, D.C.: The Urban Institute, 1981).